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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/758,367

01/15/2004

Jacques H. Houle

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750 MAIN STREET
SUITE 1400
HARTFORD, CT 06103

EXAMINER

ADDISU, SARA

ART UNIT

PAPER NUMBER

3724

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/758,367	Applicant(s) HOULE, JACQUES H.	
	Examiner SARA ADDISU	Art Unit 3724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 13-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 13, 14, 16-19 is/are rejected.
- 7) ☒ Claim(s) 9 and 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is in response to the amendment filed 2/22/08. Currently, claims 1-9 and 13-19 are pending in this application.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "linear trough" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 13-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 13 recites "...two diametrically opposed flutes, each flute defining a linear trough". It is not clear to the examiner what the Applicant is considering to be a linear trough. It is also not clear to the Examiner how "each flute" can form a trough. For the purpose of this Office Action, Examiner is interpreting it to mean the first and the second linear flutes meet.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 13, 14 and 16-19, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Durfee (USP 5,149,234), in view of George et al. (USP 2004/0151553).

DURFEE teaches an insert comprising: a drill holder defining a shank (20), an insert body (12) supporting a drill point for rotation in a cutting direction about a rotational axis, said drill point comprising: a linear cutting edge (38) inclined at an angle relative to said rotational axis (see figure 1), said cutting edge formed at an intersection of a substantially planar first flute surface (28) and a substantially conical land surface (26), said land surface radially approaches said axis of rotation in a direction opposite said cutting direction ('234, figures 11-3 and col. 3, lines 16-18 and 52-54). Although DURFEE teaches a single cutting edge (i.e. not a pair), it is old and well known in the art to have multiple cutting edges depending on the size of the tool, the material being cut..etc. Regarding claim 4, DURFEE teaches a second planar flute surface (21). DURFEE also teaches an included angle (α) of 60-120 degrees which reads on the limitations (less than 80 degrees or approximately 60 degrees) claimed in claims 2, 3, and 18). Furthermore, regarding claim 13, the first and the second linear flutes (28, 30) meet ('234, figure 1). Regarding claim 17, REF it would have been obvious to one having ordinary skill in the art at the time the invention was made to select the dimensions of the offset of the land surfaces relative, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. Applicant should further note that Specification gives no criticality to the claimed limitation (see Page 8).

However, DURFEE fails to teach a chisel edge supported by the drill point, said chisel edge having diametrically opposite ends.

GEORGE ET AL. teaches a spot drilling tool having a rotational axis, chisel edge (41) with diametrically opposite ends, a pair of linear cutting edges (36), a planar first flute surface (33) and a conical land surface (45) ('553, figures 2, 3, 3a). GEORGE ET AL. also teaches said chisel edge (41) and cutting edges (36) being centered on said rotational axis and each said land surface (45) radially approaches said axis of rotation in a direction opposite said cutting direction (35) ('553, figure 3a). Furthermore, GEORGE ET AL. teaches said cutting edges (36) extending from each end of the chisel edge (41) and being inclined at an angle relative to the rotational axis ('553, figure 4). GEORGE ET AL. also teaches a second planar surface (44). GEORGE ET AL. teaches angle gamma being within the range of between 10 degrees and 25 degrees, alternatively 25 degrees to 45 degrees or about 15 degrees, therefore the cutting edges define an included angle of approximately 60 degrees (i.e. less than 80 degrees) when gamma is 45 degrees (see figure below). GEORGE ET AL. also teaches the stress at the center portion of the helical cutting tool is limited by the chisel edge and first portion of the cutting edge near the center portion having a balanced geometry, whereby the balanced geometry of the helical drill also prevents the drill from wobbling and creating deviations in the hole being formed ('553, paragraph 9).

3. Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Durfee (USP 5,149,234), in view of George et al. (USP 2004/0151553) and further in view of Mast et al. (USP 7,147,414).

The modified device of DURFEE teaches a drill body (12) having a pair of linear cutting edges (38) inclined at an angle relative to said rotational axis (see figure 1), said cutting edge formed at an intersection of a substantially planar first flute surface (28), as set forth in the above rejection.

However, the modified device of DURFEE fails to teach the cutting portion of the tool being an insert that is received within a socket.

Mast teaches a spot drilling insert and a drill holder having an insert receiving socket (30) that is complementary to the socket-mating portion of the insert ('414, figures 1 and 2).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to make DURFEE's cutting portion a separate insert, as taught by Mast for the purpose of having the capability for quick changing of the insert upon wear of the cutting surfaces instead of the entire tool, and allows for one tool to be used for a variety of different boring applications by simply changing the insert and not the entire drill assembly ('414, col. 1, lines 34-38).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify DURFEE such that it has a chisel edge, as

taught by GEORGE ET AL. for the purpose of having a better centering for the tool ('553, paragraph 9).

Allowable Subject Matter

Claims 9 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments with respect to the claim have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sara Addisu at (571) 272-6082. The examiner can normally be reached on 8:30 am - 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer Ashley can be reached on (571) 272-4502. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Art Unit: 3724

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

/Sara Addisu/
Examiner, Art Unit 3722
8/1/08

/Boyer D. Ashley/
Supervisory Patent Examiner, Art Unit 3724